

AMENDMENTS TO THE CLAIMS

1.-6. (Cancelled).

7. (Currently Amended) An NMR analyzer comprising: wherein a first room-temperature space is formed penetrating through a cryostat along a center axis of a split-type multi-layer cylindrical superconducting coil system which has a ratio of the maximum empirical magnetic field to the central magnetic field of not larger than 1.3, and which ~~and~~ is horizontally arranged such that ~~[[the]]~~ a center axis of the coil system is in the horizontal direction,

a cryostat housing said split-type multi-layer cylindrical superconducting coil system,

a first room-temperature space formed penetrating through said cryostat along said center axis,

a room-temperature shim coil system is arranged in said first room-temperature space to improve magnetic field homogeneity therein,

~~the homogeneity of the magnetic field,~~ a second room-temperature space ~~[[is]]~~ formed penetrating through the cryostat and passing through the center of ~~[[said]]~~ a split gap of said split-type multi-layer cylindrical superconducting coil system in ~~[[the]]~~ a vertical direction,

~~and a sample to be measured and an NMR probe having a solenoid-type probe coil~~ ~~[[are]]~~ inserted in said second room-temperature space, and

an electromagnetic wave-irradiating system for irradiating electromagnetic waves of wavelengths of not larger than 0.1 mm, and which is provided in said first room-temperature space~~wherein said first room-temperature space is further provided with a system for irradiating electromagnetic waves of wavelengths of not longer than 0.1 mm.~~

8. (Currently Amended) An NMR analyzer according to claim 7, further comprising ~~wherein a first room-temperature space is formed penetrating through a~~

~~cryostat along a center axis of a split-type multi-layer cylindrical superconducting coil system which has a ratio of the maximum empirical magnetic field to the central magnetic field of not larger than 1.3 and is horizontally arranged such that the center axis of the coil is in the horizontal direction, a room-temperature shim coil system is arranged in said first room-temperature space to improve the homogeneity of the magnetic field, a second room-temperature space is formed penetrating through the cryostat and passing through the center of said split gap in the vertical direction, a sample to be measured and an NMR probe having a solenoid-type probe coil are inserted in said second room-temperature space, and a third room-temperature space is formed penetrating through the cryostat and intersecting the first room-temperature space and said second room-temperature space at right angles thereto.~~

9. (Cancelled).

10. (Currently Amended) The NMR analyzer according to claim 7 ~~any one of claims 7 and 8~~, wherein said central ~~[[the]]~~ magnetic field at ~~the center of the coil~~ is not smaller than 11.5 T.

11. (Currently Amended) The NMR analyzer according to claim 7 ~~any one of claims 7 and 8~~, wherein the overall height of said NMR analyzer ~~the apparatus~~ is not larger than 2.0 m.

12. (Currently Amended) The NMR analyzer according to claim 7, wherein the electromagnetic waves are any one kind of, or a plurality of kinds of, far infrared rays, infrared rays, visible rays, ultraviolet rays, X-rays and γ -rays.

13. (Currently Amended) The NMR analyzer according to claim 7 ~~any one of claims 7 and 8~~, wherein the distance along said ~~[[the]]~~ center axis is not larger than 1.5 m between a cryostat installing ~~[[the]]~~ floor surface and the split-type multi-layer cylindrical superconducting coil system ~~horizontally arranged in a manner that the center axis of the coil thereof is in the horizontal direction.~~

14. (New) The NMR analyzer according to claim 7, further comprising an electromagnetic wave detection system for detecting electromagnetic waves having wavelengths of not larger than 0.1 mm.